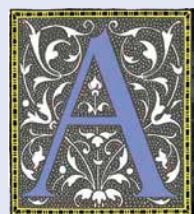


# Wildflower in Focus - Hairy Snoutbean

*Rhynchosia tomentosa* (Linnaeus) Hooker & Arnott  
Hairy (or twining) snoutbean



fter admiring the flower on the cover, you might have been surprised to learn its name. Hairy snoutbean? Kerry Wixted of the Wildlife and Heritage Service comments, “I love the common name! It does have a hairy bean that looks like a schnoz. ;)” This issue of *Mari-landica* features hairy snoutbean not only for its beauty and its odd name, but because it’s a member of the Pea Family (Fabaceae), and 2017 is the Maryland Native Plant Society’s *Year of the Pea*.

## THE PEA FAMILY

The peas comprise the third largest plant family (after the asters and the orchids), with over 20,000 species worldwide. Maryland Plant Atlas lists 42 genera and 122 species present in Maryland, some herbaceous and some woody, some native and some exotic. Using the snoutbean as an example, let’s look at the characteristics typical of the Pea Family. Encountering this plant for the first time, how would you know it’s a pea? It has a square stem and an irregular flower. Could it be a mint? Nope. The leaves are alternate, not opposite like mints. The flower looks just like a butterfly. And the leaves are trifoliate. So it must be a pea.

Not visible to the eye is another characteristic of most Pea Family members—their ability to fix nitrogen in the soil. This ability is not unique to the Pea Family, as it is shared by a few members of other plant families. Nitrogen fixation is an elegant example of the interaction and interdependence of different organisms. Because nitrogen is a component of protein, all plants and animals need it for survival, and they need it in a biologically accessible form; they can’t take it from the air. Nitrogen-fixing plants and other organisms provide the solution by synthesizing usable nitrogen compounds. Meanwhile, the nitrogen-fixation in plants like the peas is actually accomplished by symbiotic bacteria in root nodules—not by the plant tissue itself.

## HAIRY SNOUTBEAN

Hairy Snoutbean can be found growing on Maryland’s Eastern Shore, on ancient, low, pine-covered sand dunes that were formed between 30,000 and



*Rhynchosia tomentosa* (Linnaeus)



13,000 years ago. The Maryland Plant Atlas shows records from Calvert and Anne Arundel Counties. It is native from Maryland south into Florida and west into Texas. Interestingly, Tennessee and Kentucky are included in its range, indicating that it is not strictly a coastal plain species.

Hairy snoutbean is ranked S2, State Threatened, primarily because of habitat loss due to conversion to agriculture, residential development, and timber management. According to the Conservation/Ecology note in the RTE list, “this species quickly responded to prescribed fire management at one site, appearing robustly in the new habitat (apparently from the seed bed).” (See the article on page 5 to learn about the RTE List.)

One reason why Maryland has so many rare plants is that it is located at the southern end of northern ecosystems and at the northern end of southern ecosystems. Hairy snoutbean is an example of this phenomenon; Maryland is at the northern periphery of its range. If a species is doing fine in other areas, why bother to preserve it in Maryland? In fact, conserving peripheral populations can be especially important. This is because peripheral populations often diverge genetically from central populations as a result of isolation, genetic drift, and natural selection. The survival of species may depend upon the existence of genetically distinct populations that can thrive under changing conditions. (See, e.g., P. Lesica and F.W. Allendorf. 1995. When Are Peripheral Populations Valuable for Conservation? *Conservation Biology* 9:753-760.)

- Kirsten Johnson

### Pea Family Visible Characteristics

- Leaves alternate and stipulate.
- Flowers papilionaceous (shaped like a butterfly), in racemes, spikes or heads.
- 5 sepals, usually forming a short basal tube.
- Compound leaves, often trifoliate.
- Petiole and petiolules with swollen bases
- Fruit a legume

*Pictured Left: Rhynchosia tomentosa.* USDA-NRCS PLANTS Database/ Britton, NL, and A Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions.* 3 vols. Charles Scribner's Sons, New York. Vol. 2: 422.